

WHAT IS CLAIMED IS:

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A2
1. An enclosure for underground use having a plurality of prefabricated panels formed of a fiber resinous composite matrix, comprising:

- 3 a plurality of interconnecting vertical panels;
4 a floor panel attached to a lower end of the vertical panels; and
5 a ceiling panel attached to an upper end of the vertical panels, wherein said vertical,
6 floor, and ceiling panels include opposing substantially planar sheets attached to a plurality of
7 spaced support members disposed between the sheets.

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2. The enclosure of claim 1, wherein the plurality of vertical panels comprises opposing
2 longitudinal wall panels and opposing lateral wall panels.

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3. The enclosure of claim 2, further comprising a plurality of fiber resin angle members for
bonding the longitudinal wall panels to the lateral wall panels at perpendicular
3 interconnections therebetween.

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4. The enclosure of claim 2, wherein the plurality of vertical panels further comprises a
2 bulkhead panel.

1 5. The enclosure of claim 2, wherein the longitudinal wall panels and the lateral walls
2 panels include an overlapping joint for attaching to the floor panel and the ceiling panel.

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6. The enclosure of claim 2, further comprising a plurality of connectors for joining
adjacent lateral wall panels and adjacent longitudinal wall panels, wherein the lateral wall
3 panels and the longitudinal wall panels include ends for interconnecting with said connectors.

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7. The enclosure of claim 6, wherein the connectors are bands of fiberglass bonded to
2 the ends of adjacent lateral wall panels and adjacent longitudinal wall panels.

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1 8. The enclosure of claim 6, wherein the connectors are interposed between ends of the
2 adjacent lateral wall panels and adjacent longitudinal wall panels (such a portion of the planar
3 sheets are received and bonded to the connectors.)

Sub B1 p. 2
2 The enclosure of claim 1, wherein said vertical, floor, and ceiling panels comprise, by weight at least 40% fiberglass.

Sub B1
2 10. The enclosure of claim 1, wherein said vertical wall panels, said floor panels, and said ceiling panels are unitarily formed.

1 11. The enclosure of claim 1, wherein the opposing sheets of the vertical panels include
2 an outer sheet on an exterior of the enclosure and an inner sheet in an interior of the
3 enclosure.

1 12. A pultruded panel for constructing a buried vault, comprising:
2 a first sheet being substantially planar;
3 a second sheet being substantially planar; and
4 a plurality of spaced support members fixedly connected between the first and second
5 sheets.

1 13. The panel of claim 12, wherein the first and second sheets are connected to the support
2 members by an adhesive bonding.

1 14. The panel of claim 12, wherein the first and second sheets are integrally formed with the
2 support members.

1 15. The panel of claim 12, wherein the each support member includes at least a web and
2 opposing surfaces for the sheets to connect thereto, the web extending between the opposing
3 surfaces.

1 16. The panel of claim 12, wherein the panel includes opposing longitudinal ends that are
2 offset for joining to an abutting panel in the longitudinal direction.

1 17. The panel of claim 12, wherein the panel comprises, at least 40% fiberglass by weight.

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1 18. A method of making an enclosure for underground use, comprising the steps of:
2 pultruding a plurality of panel members having a fiber resin composition;
3 interconnecting the panel members together to form a plurality of panels; and
4 bonding the panels to form the enclosure.

1 19. The method of claim 18, further comprising the step of pultruding a substantially
2 planar sheet.

1 20. The method of claim 19, further comprising the step of pultruding a support member
2 that attaches to the planar sheet.

1 21. The method of claim 20, further comprising the step of pultruding an angle member.

1 22. The method of claim 18, wherein the step of interconnecting includes bonding the
2 panels with an adhesive.

1 23. The method of claim 18, wherein said pultruding step includes pultruding a plurality
2 of longitudinal and lateral wall panels, a top panel, and a floor panel.

1 24. The method of claim 23, further comprising the step of forming an access in a wall
2 panel.

1 25. The method of claim 18, wherein said pultruding step includes pultruding said panel
2 members having a fiber resin composition of at least 40% fiberglass by weight.

1 26. The method of claim 25, wherein said pultruding step includes pultruding said panel
2 members having a fiber resin composition of at least 50% fiberglass by weight.

1 27. The method of claim 18, wherein said pultruding step includes pultruding said panel
2 members having a fiber resin composition of at least 40% fiber material by weight

1 28. A method of making an vault enclosure, comprising the steps of:
2 providing a plurality of panel sections having a fiber reinforced composition wherein
3 the panels sections include a plurality of wall sections;
4 assembling the panel sections to form the vault enclosure;
5 removing a wall section from the vault enclosure prior to installation on a work site;
6 integrating equipment into the vault enclosure; and
7 replacing the wall section in the vault enclosure.

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